25 AUG 2003

RECORD OF DECISION
For
PHASE 1 of the
ST. JOHNS BAYOU AND NEW MADRID FLOODWAY, MISSOURI
FLOOD CONTROL PROJECT
MISSISSIPPI RIVER AND TRIBUTARIES
FINAL REVISED SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

I have reviewed the Final Revised Supplemental Environmental Impact Statement (RSEIS) describing the need for protection from flooding in the St. Johns Bayou and New Madrid Floodway basins in southeast Missouri. I have also reviewed the comments to the Final RSEIS provided by other agencies and the public and the U.S. Army Corps of Engineers (Corps) analysis of the comments. Based on my review and the comments received on the proposed work from agencies and the public, I find the recommended plan (Alternative 3.1.B) will meet the authorized objective to provide necessary flood protection, is an environmentally acceptable plan, economically justified, in the public interest, and in compliance with all Federal, State, and local requirements. I have also considered the conditions contained in the Missouri Department of Natural Resources' (MDNR) June 9, 2003, Water Quality Certification in conjunction with the settlement agreement reached between the Corps and MDNR. All practicable means to avoid and minimize environmental harm have been adopted and unavoidable impacts are fully compensated. I, therefore, approve the recommended plan for construction.

The project for flood control, St. Johns Bayou and New Madrid Floodway, Missouri, was authorized by Title IV, Section 401(a) of the Water Resources Development Act (WRDA) of 1986, and modified by Title III, Section 331 of WRDA 1996. A reevaluation of project Phase 1 flood damage reduction measures and alternative mitigation features was the focus of the RSEIS. The recommended plan was developed pursuant to these Congressional authorizations.

The Corps considered the following alternative plans: (1) no-action; (2) Phase I of the comprehensive flood control plan as authorized in 1986; (3) the recommended plan; (4) several alternatives similar to the recommended plan with different New Madrid Floodway levee closure locations; (5) alternate timing and elevations of gate and pump operations; (6) a ring levee around East Prairie; (7) a St. Johns Bayou Basin only plan; (8) a National wildlife refuge development proposal; (9) conversion of cropland to silviculture; and (10) non-structural urban and rural measures. The no-action alternative would avoid all environmental impacts, but it would not provide the authorized project objective of flood control. Phase 1 of the comprehensive plan was eliminated because this plan was not environmentally preferable and because a non-Federal sponsor was not available to cost-share much of the channel work in the plan. Although considered environmentally preferable by some commenters, the alternative levee closure locations resulted in minimal reductions in environmental impacts in comparison to the recommended plan while providing significantly less flood damage reduction, and therefore were not economically justifiable. The Corps considered the remaining alternatives, but it became apparent that the level of flood protection they afforded was not in accord with overall project objectives.

The recommended plan for Phase 1 of the project is Alternative 3.1.B. Primary features of this plan are a 1,000 cubic feet per second (cfs) pumping station and 27.6 miles of channel modifications for the St Johns Bayou Basin and a levee closure with a gated outlet structure and

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a 1,500 cfs pumping station for the New Madrid Floodway. This work would reduce headwater and backwater flooding on up to 130,000 acres in both basins for a major (approximately 30-year) flood event and prevent substantial damages from occurring to the urban areas of East Prairie and Pinhook, to infrastructure and the agricultural economy. The St. Johns Bayou Basin pump station will be constructed along the Birds Point-New Madrid setback levee several hundred feet to the east of the existing gravity outlet structure for St. Johns Bayou. The channels being modified in the St. Johns Bayou Basin are St. Johns Bayou, Birds Point-New Madrid Setback Levee Ditch, and St. James Ditch. The 27.6 miles of channel modifications are significantly reduced from the authorized 144 miles of channel improvements and avoid most environmental impacts in that area. The recommended plan proposes no channel improvements in the New Madrid Floodway except for the placement of rock dikes for habitat improvement. The levee closure, gated outlet, and pumping station in the New Madrid Floodway would be constructed in the 1,500-foot gap at the lower end of the floodway to the east of the City of New Madrid, Missouri. The project also provides the capability to flood up to 6,400 acres for waterfowl during the annual winter migration season.

Avoid and minimize measures incorporated into the recommended plan for Phase 1 of the project include:

- avoiding work in over 116 miles of channels, including one reach where the state-endangered golden topminnow exists;
- reducing the authorized bottom width of channels as much as 60 percent;
- performing channel work solely from one channel bank to preserve established vegetated areas;
- performing bank stability and transition measures;
- constructing 29 in-stream structures for fishery habitat improvement;
- establishing a riparian buffer along up to 64 miles of New Madrid Floodway channels, based on land availability;
- establishing a 4-mile long wildlife corridor connecting Big Oak Tree State Park to the Ten Mile Pond Wildlife Conservation Area;
- increasing the crop season stop pump elevation in St. Johns Bayou Basin from 277 to 280 feet NGVD to retain an additional 1,100 acre-feet of water for fishery habitat;
- increasing the crop season stop pump elevation in the New Madrid Floodway from 275 to 280 feet NGVD and the prime fish spawning season stop pump elevation from 280 to 283.4 feet NGVD, to retain 11,300 acre-feet of water for fishery spawning and rearing habitat; and
- increasing the elevation at which the gated structure would be closed and the pump started to 284.4 feet NGVD until May 15 annually, to allow connectivity with the Mississippi River through the end of the mid-season fisheries rearing period.

A mitigation analysis was conducted and a compensation plan was selected. This plan requires the acquisition of a total of 9,140 acres of land for mitigation. Compensatory mitigation for unavoidable environmental impacts will be accomplished by the reforestation of approximately 8,375 acres, which will be acquired in fee, with 1,317 acres (Section 6.1, RSEIS) required for St. Johns Bayou Basin impacts and 7,058 acres required (Section 6.2, RSEIS) for New Madrid Floodway impacts. The primary goal of the mitigation plan is the reforestation of frequently flooded cleared lands to bottomland hardwoods. Since most of the acreage would involve conversion of prior converted croplands to bottomland hardwoods, this would result in the creation of jurisdictional wetlands. This creation of bottomland hardwood wetlands would offset the potential project impacts to farmed wetlands. These mitigation lands will be obtained from willing sellers as described in Appendix L of the RSEIS. Frequently flooded lands are the most

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desirable lands to provide this compensation and will be the focus of the mitigation lands acquisition efforts. Other desirable mitigation lands that are not within the 2-year floodplain will be pursued for acquisition, in particular, the approximately 1,800 acres immediately surrounding Big Oak Tree State Park. Resource agencies may also desire acquisition of lands adjacent to Ten Mile Pond Conservation Area or other areas where connectivity to the Mississippi River may be limited, but overall enhancement for fish and wildlife resources could be achieved. In addition to the acquisition of 8,375 acres, the mitigation plan also includes acquiring restrictive real estate easements or fee title to 765 acres of herbaceous lands that can be managed to benefit shorebirds.

My review indicates that, with implementation of these mitigation measures, all significant fish and wildlife losses will be fully compensated and that, in some cases, a net benefit to the resource will result. The added features of wildlife and riparian corridors and implementation of a stream-bank buffer plan for the New Madrid Floodway have the potential to substantially improve habitat for wildlife.

Compensation measures will be implemented prior to and concurrent with construction in accordance with Section 906 of the WRDA of 1986 (Public Law 99-662) as referenced in Section 6.3 of the RSEIS. Water Quality Certification Condition # 4 specifies that neither the New Madrid portion of the project nor the St. Johns Bayou portion of the project will be operated until all mitigation lands for each respective portion of the project are acquired and Missouri Department of Natural Resources (MDNR), Missouri Department of Conservation (MDC), and the Department of Interior (DOI) have had an opportunity to review their suitability. The timing of mitigation lands acquisition is compliant with, and no more restrictive than, the WRDA 1986, Section 906 requirements.

The New Madrid Pump Station and levee closure portion of the project may not be operated until the 7,058 acres of mitigation lands have been identified, resource agencies have reviewed their suitability for mitigation purposes and acquisition has been completed. Accordingly, the Corps will initially construct the portion of the New Madrid Floodway levee closure upon which the New Madrid Pump Station will be located, prior to acquisition of mitigation lands. The remaining gap between the New Madrid Pump Station and the Frontline Levee will not be closed until the mitigation requirements are satisfied. Similarly, the St. Johns Pump Station will not be operated until all 1,317 acres of mitigation lands for the St. Johns Bayou Basin portion of the project have been identified, reviewed for suitability, and appropriate lands have been acquired. Shorebird areas in the amount of 105 acres for St. Johns Bayou Basin and 660 acres for the New Madrid Floodway must also be acquired before either project feature may be operated.

In addition to the mitigation described in the RSEIS, a Preliminary Mitigation Plan was developed and submitted to MDNR on July 29, 2003. Subsequent detailed mitigation plans will be submitted for each tract of land purchased for mitigation and prior to the construction of any individual feature, such as in-stream channel modifications, pumping stations, or the levee closure feature. Prior to construction of the recommended plan, the Corps, in coordination with appropriate Federal and Missouri resource agencies and the local sponsor, will prepare these detailed mitigation plans that will address site-specific implementation details. The participating cooperating agencies include MDC, MDNR, U.S. Fish and Wildlife Service, and the Environmental Protection Agency, as well as the local sponsor.

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To assure and document the effectiveness of the mitigation land reforestation and shorebird management areas, the Corps will develop and implement a monitoring plan as stated in the RSEIS (Appendix L, Section 11.1.2 RSEIS). As appropriate, adaptive adjustments to the mitigation measures will be made if necessary, based on results of these monitoring efforts. However, these adaptive adjustments will not apply to the outlet gates or pumping stations at either the New Madrid Floodway or the St. Johns Pump Stations unless such adjustments can be made without incurring additional impacts in the project area and without increased costs for project operation and maintenance.

A plan to monitor the effects of project implementation on existing jurisdictional wetlands and waterway biological communities will also be developed. The monitoring plan is to continue for 5 years after project operation begins. If it is determined that project implementation is impacting jurisdictional wetlands beyond that described in the RSEIS, the Corps will make every effort to mitigate or otherwise ameliorate those impacts.

In addition to acquiring a portion of the mitigation lands in the vicinity of Big Oak Tree State Park, water supply will be made available from the Mississippi River and water level management capability will be provided to the park complex. The measures to be taken and coordination for their implementation are detailed in the June 9, 2003, Memorandum of Understanding between MDNR and the Corps for the Protection of Big Oak Tree State Park. This plan will increase the size of and management opportunities for Big Oak Tree State Park. This plan will be developed in coordination with MDNR, and the specific details will, at a minimum, include a mechanism to supply the park with a supplemental source of surface water, control structures, and berms. It is anticipated that these Federal measures will save an estimated $1.2 million that MDNR may use for other needs.

The recommended plan also requires acquisition of other lands for project purposes. This acquisition must be completed prior to operation of the project. These additional real estate requirements include the acquisition of flowage easements for the right to impound water on lands that would not necessarily be inundated during post-project conditions. Included are areas for winter waterfowl ponding and springtime river connectivity for fishery habitat.

The Corps completed evaluation of additional channel alternatives in the St. Johns Bayou Basin and presented the evaluation to MDNR on July 29, 2003. None of the additional channel alternatives were economically feasible. Therefore, no changes were made to the recommended plan due to the additional analyses contained in the evaluation.

Construction of the New Madrid Floodway levee closure and gated outlet structure will reduce the Mississippi River connectivity to floodway channels and over bank areas subject to backwater. This is particularly true for those areas above the springtime modified gate management elevation of 284.4 feet NGVD. This will result in a loss of fishery habitat during the fish spawning and rearing period. In order to minimize this impact, the project includes up to 64 miles of riparian buffer along floodway channels and a 4-mile long wildlife corridor connecting Big Oak Tree State Park to Ten Mile Pond Wildlife Conservation Area. While overall fishery spawning and rearing habitat may be reduced, the quality of the remaining habitat can be greatly enhanced with these measures.

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My review indicates that the recommended flood damage reduction plan has positive social and habitat benefits and the greatest net benefits over costs, without unacceptable environmental impacts with the implementation of the recommended mitigation measures. The State of Missouri Department of Natural Resources issued Clean Water Act Section 401 water quality certification for the project in conjunction with the Settlement Agreement on June 9, 2003.

The Record of Decision completes the requirements of the National Environmental Policy Act.

25 Aug 2003
Date

Don T. Riley
Brigadier General, U. S. Army
President Designee, Mississippi River Commission

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